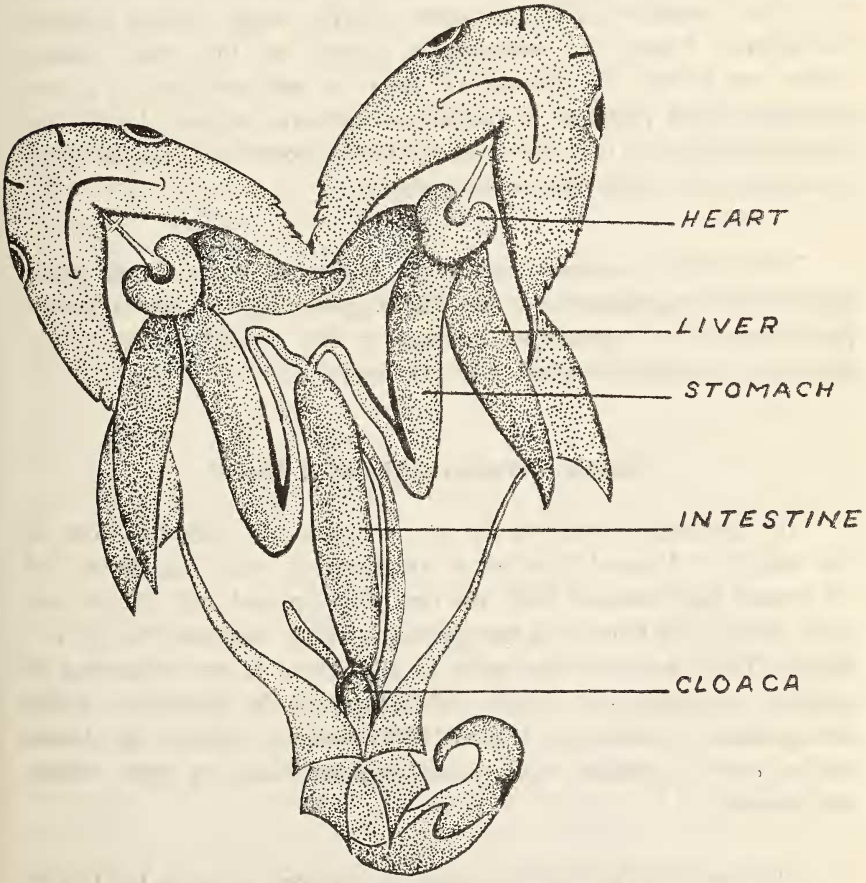
18. ON TWO ABNORMAL SHARKS FROM GUJARAT

(*With a text-figure*)

The two abnormal sharks which form the subject of this note were collected by me in the course of a fishery investigation on the Gujarat coast. One of them, a double-headed specimen of *Carcharias walbeehmi* (Bleeker), was obtained from landings brought to a fish curing yard at Porbandar in January 1964, and the other, a thumb snouted albino of *Eulamia dussumieri* (Muller & Henle), from Veraval in May 1962. The only previous record of similar specimens from India appears to be that of Menon (1959)[1] from West Hill.



1 Menon, M. Devidas—(1959): On some abnormal sharks preserved at the Marine Biological Station, West Hill. Fisheries Station Reports and Year Book, April 1955 to March, 1956. Department of Fisheries, Government of Madras. pp. 191-194.

Carcharias walbeehmi (Bleeker)

The specimen measuring 16 cm. in length was obtained from the womb of a mother shark of 80 cm. length. The heads are distinct up to the fifth gill cleft which is common for both at the side of union. Both heads have five normal gill clefts on their free sides. Among the fins, the pectoral, pelvic and caudal are common whereas the first and second dorsal are paired. A single placental chord emerged from between the pectorals.

Among the visceral organs a striking abnormality is exhibited by the alimentary canal where the duodenum of both the partners come from their respective sides and open into the single median intestine (text-figure). Except the urinogenital system, all the other visceral organs are paired. The circulatory system is seen modified as a consequence of the presence of paired and unpaired organs. Liver lobes lying on the side of union are comparatively shorter and less developed than those on the free sides of the embryo.

The vertebral columns meet at the beginning of the caudal region from where they gradually coalesce. The crippled caudal fin curves forward producing a blunt appearance posteriorly. The general pattern of pigmentation indicates the identity of the embryo.

Eulamia dussumieri (Muller & Henle)

The specimen measuring 28 cm. in length was collected from the fish market at Veraval. The fish is conspicuously white due to the lack of normal pigmentation. Both the eyes are displaced and situated ventrally behind the blunt and spongy snout which resembles the tip of a thumb. There are only four pairs of gill clefts. A scar indicating the position of placenta is clearly visible between the pectorals. Unlike the specimen described by Menon (1959) both the eyeballs are distinct in the present specimen with normal pigmentation. All other features are normal.

This work was carried out during the author's tenure in the Department of Fisheries, Gujarat State, and the specimens after the examination have been preserved at the museum of the Survey and Research Centre at Veraval.

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19. NOTES ON THE BIOMETRIC FEATURES OF *NEMIPTERUS JAPONICUS* (BLOCH)[1]

(*With two text-figures*)

INTRODUCTION

Observations regarding the biometry and biology of *Nemipterus japonicus* from Indian waters are limited to the unpublished data of Amarnath (1961) and the Annual Reports of the Central Marine Fisheries Research Institute. This note deals mainly with some aspects of the biometry of the fish and its food.

At Porto Novo (*c.* 11° 29' N., 79° 49' E.), *N. japonicus* occurs in abundance from October to February but stray catches occur in other months also. According to the 1961 report of the Central Marine Fisheries Research Institute, the fish occurs in shoals off Tuticorin during August and September and is also caught in fairly large quantities at 27-31 m. depth off Cochin. *N. japonicus* has a wide distribution and has been recorded from the coastal waters of India, the Red Sea and from the east coast of Africa (Day 1878).

MATERIAL AND METHODS

Since the fishery of *N. japonicus* at Porto Novo is seasonal, it was possible to get adequate samples only for a period of five months (October-February). The fish is generally caught in *Thoori valai* or bag nets, operated from catamarans. Samples were obtained from the main fish landing centres and also from the local fish market. Ninety specimens were examined. The usual methods were used for weight and length measurements and for analysis of stomach contents. Standard length of the fish was used as a basic prerequisite against which regression curves for other parameters were drawn. For estimating the length-weight relationship of the fish, only the total length of the fish was taken into consideration.

[1] This study formed a part of the dissertation submitted in partial fulfilment of the requirements for the degree of M.Sc., from the Annamalai University, 1965.